

Title (en)
HYDROGEN ION ELECTRODE COMPOSED OF COMPOSITE MATERIAL OF NANO IRIIDIUM OXIDE AND POLYMER RESIN AND ENABLING SURFACE REGENERATION, PH SENSOR USING SAME, AND METHOD FOR MANUFACTURING SAME

Title (de)
WASSERSTOFFIONENELEKTRODE AUS VERBUNDSTOFF AUS NANOIRIDIUMOXID UND POLYMERHARZ UND ERMÖGLICHUNG VON OBERFLÄCHENREGENERIERUNG, PH-SENSOR DAMIT UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)
ÉLECTRODE POUR IONS HYDROGÈNE COMPOSÉE DE MATIÈRE COMPOSITE D'OXYDE D'IRIDIUM NANOSCOPIQUE ET DE RÉSINE POLYMÈRE ET PERMETTANT UNE RÉGÉNÉRATION DE SURFACE, CAPTEUR DE PH L'UTILISANT ET PROCÉDÉ POUR SA FABRICATION

Publication
EP 3037811 A4 20170419 (EN)

Application
EP 14838569 A 20140814

Priority
• KR 20130098696 A 20130820
• KR 20140105436 A 20140813
• KR 2014007578 W 20140814

Abstract (en)
[origin: EP3037811A1] Provided are a hydrogen ion electrode composed of a composite material of polymer resin and nano iridium oxide, the composite material containing 1-10 nm sized nano iridium oxide particles and/or aggregates thereof which are dispersed to be electrically connected to each other in a moldable, thermoplastic, and hydrophobic polymer resin matrix; a pH sensor using the same; and a method for manufacturing the same. The surface of the hydrogen ion electrode shows very fast pH sensitivity when exposed to a sample solution, and the pH sensitivity is approximate to biphasic characteristics. Furthermore, regardless of high reproducibility of pH sensitivity, abrupt pH change, and repetitive use, very low hysteresis, durability due to high physical strength, and high surface regeneration due to polishing are exhibited, and thus, the lifetime of the electrode can be extended and various sizes and shapes of electrodes can be easily manufactured.

IPC 8 full level
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CPC (source: EP KR US)
B82B 3/00 (2013.01 - KR US); **G01N 27/30** (2013.01 - KR); **G01N 27/302** (2013.01 - EP KR US); **B29C 35/00** (2013.01 - US); **B29C 39/02** (2013.01 - US); **B29C 2059/027** (2013.01 - US); **B82Y 15/00** (2013.01 - US); **B82Y 30/00** (2013.01 - US); **B82Y 40/00** (2013.01 - US); **C08J 3/24** (2013.01 - US); **G01N 27/4167** (2013.01 - EP US)

Citation (search report)
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